

ABSTRACT

1 Active power factor correction (PFC) circuits are used to minimize unwanted harmonic
2 distortion in applications where AC electrical power is rectified to produce DC power needed for
3 operating electrical equipment. A variable amplitude regulator (VAR) is a PFC control interface
4 which is simpler to implement than conventional circuits, and offers a wider dynamic operating
5 range. The VAR functions as a resistor scaling network using a two-stage RC filter to maintain the
6 DC output voltage constant for various load conditions and to maintain the rectified current in phase
7 with the sinusoidal circuit flow in an AC power line, through both slow and rapid changes in the load
8 coupled to the direct current output. This control interface offers excellent performance
9 characteristics and requires only a few components for a useful implementation.